What is claimed is:

1. A lithography apparatus configured to form a pattern onto a semiconductor device, comprising:

a guide beam:

a translational structure having a work piece holder, the translational structure surrounding the guide beam such that the weight of the translational structure is supported by the guide beam, wherein the guide beam permits the translational structure to freely move substantially in only one degree of freedom along the guide beam.

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2. The lithography machine of claim 1, wherein the work piece holder is a reticle plate.

3. The lithographic machine of claim 2, wherein the reticle plate is cantilevered of the translational structure.

4. The lithographic apparatus of claim 1, wherein the work piece holder is a wafer plate.

5. The lithographic apparatus of claim 1, further comprising a motor configured to provide an effective force through an approximate center of gravity of the translational structure.

6. The lithographic apparatus of claim 5, wherein the motor further comprises a coil and a magnetic track structure, wherein the coil is arranged to move within the magnetic track structure to cause the translational structure to move linearly along the guide beam.

7. The lithographic apparatus of claim 5, wherein the motor comprises a first coil arrange on a first surface of the translational structure and a second coil arranged on a second surface of the translational structure, the first and second coils cooperating to provide the effective force through the center of gravity of the translational structure during movement.

8. The lithographic apparatus of claim wherein:

the guide beam includes a first vacuum chamber and a second vacuum chamber; and

the translational structure includes a first airbearing structure and a reticle plate, the first airbearing structure being arranged to be in fluid communication with the first vacuum chamber and the second vacuum chamber.

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9. A lithography apparatus according to claim 8 wherein the guide beam includes four contact sides, and the first airbearing structure includes air pads arranged to substantially contact each of the four contact sides.

10. A lithography apparatus according to claim 1 wherein the guide beam is a first guide beam, the lithography apparatus further including a pair of second guide beams arranged substantially perpendicular to the first guide beam to permit movement of the , wherein the second guide beams are arranged to carry the first guide beam to permit positioning the work piece holder within two degrees of freedom.

a second airbearing structure, the second guide beam being at least partially disposed within the second airbearing structure, the second airbearing structure further being substantially rigidly coupled to the first guide beam, wherein the second airbearing structure includes air pads arranged to substantially contact two sides of the four sides of the second guide beam, the two sides being opposing sides of the second guide beam.

11. A scanning apparatus for use in a lithography system, the scanning apparatus comprising:

a first guide beam, the first guide beam including a first vacuum chamber and a second vacuum chamber; and

a translational structure having a work piece holder and a first airbearing structure, the translational structure being arranged to move linearly with respect to the first guide beam, the translational structure surrounding a portion of the guide beam such that the weight of the translational structure is supported by the guide

beam, wherein the first airbearing structure is arranged to be in fluid communication with the first vacuum chamber and the second vacuum chamber.

12. A scanning apparatus according to claim 11 wherein the first guide beam includes four contact sides, and the first airbearing structure includes air pads arranged to substantially contact each of the four contact sides.

13. A scanning apparatus according to claim 11 wherein the first guide beam is at least partially disposed within the first airbearing structure.

14. A scanning apparatus according to claim 13 further including a linear motor, the linear motor including a coil and a magnet track structure.

15. A scanning apparatus according to claim 14 wherein the coil is coupled to the first airbearing structure, wherein the coil is arranged to move within the magnet track structure to cause the translational structure to move linearly with respect to the first guide beam.

16. A scanning apparatus according to claim 15 wherein the coil includes a first portion and a second portion, the first portion being arranged above the first airbearing structure, the second portion being arranged below the first airbearing structure, wherein a centerline of the coil between the first portion and the second portion is arranged to substantially pass through a center of gravity associated with the translational structure.

17. A scanning apparatus according to claim 11 wherein the work piece holder is formed from ceramic.

18. A scanning apparatus according to claim 11 further including:

a second guide beam, the second guide beam including four sides, the second guide beam being substantially perpendicular to the first guide beam, wherein the second guide beam is not arranged to directly contact the first guide beam; and

a second airbearing structure, the second guide beam being at least partially disposed within the second airbearing structure, the second airbearing structure further being substantially rigidly coupled to the first guide beam, wherein the second airbearing structure includes air pads arranged to substantially contact two sides of the four sides of the second guide beam, the two sides being opposing sides of the second guide beam.

19. A scanning apparatus according to claim 18 further including:

a third guide beam, the third guide beam including at least four sides, the third guide beam being substantially parallel to the second guide beam; and

a third airbearing structure, the third guide beam being at least partially disposed within the third airbearing structure, wherein the third airbearing structure is coupled to the first guide beam such that the translational structure may exhibit a yawing motion.

20. A scanning apparatus according to claim 19 wherein the third airbearing structure is substantially rigidly coupled to the first guide beam, and the third airbearing structure includes air pads arranged to contact two sides the four sides of the third guide beam, wherein the two sides are opposing sides of the third guide beam.

21. A scanning apparatus according to claim 19 wherein the third airbearing structure is coupled to the first guide beam with a three-degree-of-freedom joint, and the third airbearing structure includes air pads arranged to contact each of the four sides of the third guide beam.

22. A scanning apparatus according to claim 21 wherein the three-degree-of-freedom joint is a yaw flexure.

23. A scanning apparatus according to claim 19 wherein the second guide beam includes a third vacuum chamber and a fourth vacuum chamber, the third vacuum chamber being arranged to be in fluid communication with the first vacuum chamber of the first guide beam through the second airbearing structure, the fourth vacuum

chamber being arranged to be in fluid communication with the second vacuum chamber of the first guide beam.

24. A scanning apparatus according to claim 23, wherein the third guide beam includes a fifth vacuum chamber and a sixth vacuum chamber, the fifth vacuum chamber being arranged to be in fluid communication with the first vacuum chamber of the first guide beam through the third airbearing structure, the sixth vacuum chamber being arranged to be in fluid communication with the second vacuum chamber of the first guide beam.

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25. An electron beam projection lithography system comprising:

an illumination column;

a projection column, the projection column being separated from the illumination column by a distance; and

a stage structure, including a guide beam and a translational structure and a reticle holder through which an electron beam may pass from the illumination column to the projection column, the reticle holder being arranged to be manipulated within the distance, the translational structure surrounding the guide beam such that the weight of the translational structure is supported by the guide beam, wherein the guide beam permits the translational structure to freely move substantially in only one degree of freedom along the guide beam, the translational structure further including an airbearing structure arranged to cause the translational structure to buoyantly float relative to the guide beam.

26. An electron beam projection lithography system according to claim 25, wherein the reticle holder is cantilevered from the translational structure the stage structure further including:

a magnet track; and

a coil, the coil being coupled to the translational structure, wherein the coil is arranged to move linearly within the magnet track such that the coil is substantially always within the magnet track and movement of the coil causes the airbearing structure to move linearly over the guide beam.

27. An electron beam projection lithography system according to claim 25 wherein the guide beam is a first guide structure, the electron beam projection lithography system further including:

a second guide structure, the second guide structure being coupled to the first guide structure such that the first guide structure is translationally moveable with respect to the second guide structure; and

a third guide structure, the third guide structure being coupled to the first guide structure such that the third guide structure is arranged to support translational movement and yawing movement of the first guide structure.

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